



A COMPARATIVE STUDY OF AGILITY IN KHO-KHO, FOOTBALL AND HOCKEY AMONG FEMALE PLAYERS

Dr. Raj Kumar

Associate Professor, Department of Physical Education, S.G.G.S. Khalsa College, Mahilpur, Hoshiarpur.

ABSTRACT

The main purpose of this research was to compare the agility among Kho-Kho, Football and Hockey Players. For this, a sample of Ninety (N=90) female players which includes 30 each Kho-Kho, Football and Hockey Players, between the age group of 20-25 years was selected. Various tests were applied such as Illinois Agility test, One way analysis of Variance (ANOVA) to find out the significance of difference with regards to agility and Scheffe's post hoc test (SPHT) to see the direction and significance of difference where 'F' value found statistically significant. The level of significance was set at 0.05, while comparing the means, it revealed that Kho-Kho players had shown better agility than others. Further significant difference were found between Kho-Kho, Football and Hockey Players with regards to agility ($p<0.05$).

KEYWORDS: Agility, Kho-Kho, Football and Hockey Players.

INTRODUCTION:

Agility is recognized as the ability to maintain and control body's position while rapidly moving and changing directions as a response to a stimulus. It is the ability to change the direction of body or its parts rapidly' is dependent on strength, reaction time, speed of movement and muscular coordination. Quick start and stops and quick changes in direction are fundamental to good performance in ball games. In different playing positions of basketball, handball and football a great amount of agility is required. Agility is related to physical abilities of players like strength, power, speed and balance. It is a determinant of sport performance in ball games like Kho-Kho, Football and Hockey Players. The physical characteristics of players are important predictive factors of whether the player will reach the top level of their chosen sports discipline. Although, Kho-Kho, Football and Hockey Players have some similar requirements but these are having different technical skills, training and playing procedures and hence believed that it would be reasonable to compare the agility among the female players of these games.

MATERIALS AND METHODS:

Subjects:

A sample of Ninety (N = 90) female inter college level players which includes thirty each Kho-Kho, Football and Hockey Players between the age group of 20-25 years was selected. The purposive sampling technique was used to select the subjects.

Illinois agility test:

Illinois agility test was used to measure agility on an outdoor grass pitch. The subject was asked to lie face down on the grass pitch at the "start" point with her head facing the "start", legs out straight, feet together and arms by side. On the command the subject jumped to her feet and negotiated the course around the cones to the "finish" point as fast as possible. The total time taken from when the command was given to the subject till the time when she passed the "finish" point was recorded as the score for the trial. Best of the three readings in seconds was recorded (Koley & Bijwe, 2013).

Statistical analysis:

Values are presented as mean values and SD. One-way analysis of variance (ANOVA) was employed. Following the detection of a significant mean effect, Scheffe's post-hoc analysis was performed to locate where specific mean differences were laid. Data was analyzed using SPSS Version 16.0 (Statistical Package for the Social Sciences, version 16.0, SPSS Inc, Chicago, IL, USA).

RESULTS:

Table: 1 Mean and SD values of Agility of Kho-Kho, Football and Hockey Players.

Variables	Players Groups					
	Football		Hockey		Kho-Kho	
	Mean	SD	Mean	SD	Mean	SD
Agility	18.00	1.51	20.67	1.14	16.98	1.05

Table 1 showed that while comparing the means, it revealed that Kho-Kho players had shown better agility than their counterparts; Football and Hockey player.

Table: 2. Analysis of Variance (ANOVA) among Kho-Kho, Football and Hockey Players with regards to Agility.

Variables	Source of variance	Sum of Squares	df	Mean Square	F-value	Sig.
Agility	Between Groups	218.131	2	109.066	69.72*	0.00
	Within Groups	136.087	87	1.564		
	Total	354.218	89			

*Significant at .05 level

It is evident from table-2 that significant differences were found among Kho-Kho, Football and Hockey Players with regard to agility ($p<0.05$). Since the obtained F-values were found significant, therefore, the Post-hoc test (Scheffe's) was applied to see the direction and significance of difference between paired means of Kho-Kho, Football and Hockey Players with regards to agility. The results of Post-hoc test (Scheffe's) have been presented in table-3 below.

Table: 3. Comparison of Mean Values of Post-Hoc Test (Scheffe's) among Kho-Kho, Football and Hockey Players with regards to Agility.

Variables	Players Groups			Mean Difference	Sig.
	Football	Hockey	Kho-Kho		
Agility	18.00	20.67		2.67*	0.000
	18.00		16.98	1.02*	0.008
		20.67	16.98	3.69*	0.000

*Significant at .05 level

Table-3 showed that football players have exhibited statistically significant ($p<0.05$) differences with hockey and Kho-Kho players on agility. However, hockey and Kho-Kho players have shown statistically significant ($p<0.05$) differences with regard to agility.

DISCUSSION AND CONCLUSION:

Agility is critical component of fitness for successful performance in ball games. In the present study, Kho-Kho players had shown better agility than their counterparts; football and hockey players. Fitness characteristics that have been reported as essential for Kho-Kho players are agility, speed and explosive jumping power. High level of agility would be the distinctive feature of the Kho-Kho players, since playing Kho-Kho requires quick directional changes. Agility is an essential attribute of Kho-Kho player. In Kho-Kho, the ability to accelerate, decelerate and rapid movements in all directions is more important than simply running fast. During a Kho-Kho match a player frequently performs activities that require rapid development of force, such as sprinting or quickly changing direction. The present study also attributes the same. Based on various research results, physical characteristics of Kho-Kho players are required to such a high level of speed, muscular strength and agility. While concluding, it is revealed that Kho-Kho players had better agility than their counterparts; football and hockey players.

REFERENCES:

1. Arnason, A., Sigurdsson, S.B., Gudmundsson, A., Holme, I., Engebretsen, L., Bahr, R. (2004). Physical fitness, Injuries, and Ball performance in soccer. *Med. Sci. Sport Exerc.*, 36 (2):278-285.
2. Ashok C., and Babu P. S. (2000), "A study on correlation between accuracy and anthropometric variables of university tennis players", *Indian Journal of Sports Studies*. 5,2, p.5-7.
3. Bettencourt R. M. (1971) The relationship between selected fundamental skills and level of achievement in motor skill activities. Abstract research paper. AAPHERD convention p.56s
4. Bangsbo, J. (1996). Physiology of training. In T. Reilly (Ed.), *Science and Soccer*, (pp. 51-65). London: E & FN Spon.
5. Barnes, J.L., Schilling, B.K., Falvo, M.J., Weiss, L.W., Creasy, A.K., et al. (2007). Relationship of jumping and agility performance in female handball athletes. *J Strength Cond Res* 21: 1192-1196.
6. Koley, S. & Bijwe, V. (2013). Correlations of Back Strength with Selected Anthropometric Traits and Performance Tests in Elite Indian Handball Players. *European Journal of Sports and Exercise Science*, 2 (2):1-5
7. Strype, John (1720). Survey of London. Book 1, pp. 250-251.
8. Birley, Derek (1993). *Sport and the Making of Britain*. Manchester University Press. p. 36. ISBN 9780719037597